

SEQUENCE LISTING

<110> Widschwendter, Martin

<120> Prognostic and Diagnostic Markers for cell proliferative disorders of the breast tissues

<130> K2171PCT S3

<160> 31

<170> PatentIn version 3.1

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| tgTTTTgaga | ccaaaaacta | gcatattaac | acaattcttc | ttaaacgtct | taagagtttt | 1920 |
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9/45

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10/45

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| tggggtaatt | tttttcgagg | cgggagggcgt | tgggtttttcg | gtttttttttt | tttttatttg | 780 |
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| ttggggagcg | gtagtaggtt | tggatgatcg | gcgtggcggt | tcgtaggttt | cggttcggtc | 1860 |
| gattataggg | cgcgtagtcg | tcgtcgtcgt | cgctcgtcgt | tcgtaggtgg | tagtatttgt | 1920 |
| cgtggcggtt | gaggcggttt | ttgtatagcg | ttacgaggtc | ggggatttgt | aggtagttgg | 1980 |
| cggcggttag | tacggcggtt | aggttcgggt | tagttttcgg | ggttacggtc | gcggtcgtag | 2040 |
| tcgtttttgc | gtcgttaggt | aggcggtcgg | tgtagatgaa | gttttagtatt | aggcggaata | 2100 |
| | | | | | | |
| cggtcggggt | tattatgtta | tgggttaggt | tgagtaggtt | gttatgtatt | attagggatt | 2160 |
| tgaggtaggc | gttgttggtc | gttagtacgt | ttttgtgcgc | gcggaagagg | gcgtttttgta | 2220 |
| ttacgatgat | tacgtcgtat | aagaagtttt | tggtgcgttg | gttggtgagt | tgtagtagta | 2280 |
| gttgtttgga | gtggtcgggc | gtttttatcg | tgtttagtat | cgtttggtta | gtatattttt | 2340 |
| ttgcggggat | atatatcggg | cgggtgagag | tcgtgcggcg | ttttggtcgt | ttggttttag | 2400 |
| ttcggtattt | ttttttttta | tttttttttt | tttttagttga | gcgggggtat | tagtttttgcg | 2460 |
| gtttgggtat | cggcgaagga | tcggttggtt | tttgagtggt | gagtttaggt | cggttcgttc | 2520 |
| ggattaggag | aaggagtagg | aggtagcggt | tcgtcggtgg | aggggaggtt | agggcggttt | 2580 |
| gtacgtttta | gggtatttgg | ttgggtgttg | gggttttcga | gaagaaaatt | gtttaggcgt | 2640 |
| agtgattttt | ttggagatag | ttattcgatt | taagtaaaat | gttcgtttta | ggaaaagtta | 2700 |
| tttagggcgg | agaattttat | ttaagtaggg | agaaagggag | tcgaggaatt | agcgtttttc | 2760 |
| gtttcgggag | aagttgtttt | agttggggga | agtgtacggg | aggaggggag | cgcggtgttc | 2820 |
| gtttttggcg | cgttttggtc | gggggttggt | aattttcggg | cggggttcgg | gcggcggtcg | 2880 |
| cgcggggagc | ggaggtagcg | gttgctggtg | cgggttagagc | gcgaaggctc | ggttcggcgc | 2940 |
| ggggaggcgc | ttatatcggg | gtaggaggtt | gaggtaggaa | gtaggtgggg | gggagggggg | 3000 |
| agttacgtag | tttttagggg | agggaggggg | tagcgtttcg | ggcgggtacg | gcgtatagtc | 3060 |
| ggttgcgggt | ttgattcggg | tttgcggttt | attcgcgttt | cggtttcggg | ttgggtttta | 3120 |
| tacgcgcggg | ttcggcggtt | tttttcgcgg | ttttttcggg | tttttttttt | tcggaatttc | 3180 |
| gtcgttttaa | atttggggaa | aagtttttta | attgtagata | gggcgggagg | agtgcgtcgg | 3240 |
| tttttaggtt | tcggttcgta | gttttttttc | gcggttttta | aattcggcgg | tagagttcgg | 3300 |
| agtcgagttt | tgagtttttt | tggttcgttg | tcgttcgttc | gatttcgttt | tttttttggt | 3360 |
| tcgcgggggt | tcgcgggttc | ttatttgccg | tttcggcggg | tcgggttttt | tttttcgcgg | 3420 |

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cggtggtagt ttttagtcga tgttttattc gtcgttggtta ggtttcgagt tgtgttaggg 3480
tagcggttttt gttagtttcg t 3501

<210> 8

<211> 2501

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 8

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| tttttatagt | gtaaagtgtg | ttttattatt | ttttggagta | attttattta | aaatcgtttt | 60 |
| tagtataaaa | tttaaatatt | taaatatgat | tttggttggt | ttgtttttgt | ggttttattt | 120 |
| tttttttttt | taaatttagt | tagtgtttgt | gttggttgta | atgttttttt | ttttttgtag | 180 |
| gggtcgttat | tttaggtttt | ggtttttttt | tagaaaagtt | tttttttttt | tttttagcgg | 240 |
| ggatagggtt | tgtttatttt | gatattatta | gtttatttat | atatattggt | tataagttta | 300 |
| ggttgtatcg | ttattgaaag | tttattattt | gattttgagt | agtttgagga | ttttattaaa | 360 |
| atthagggaga | tgtttagtaa | atgttgattg | aattatgatt | gtttttaata | tataaacgta | 420 |
| agattattta | ggaatatttg | ttaaaatggt | tttgtttttt | gagattttat | tttgggaggt | 480 |
| aagtagtggg | ggtttaggat | tttgattttt | gatagttttt | tgatgtttgt | atgtagaagt | 540 |
| gtagggatta | ttatattgat | aaatttttat | tatttttaag | ggggattttt | ttttttaggg | 600 |
| gttatttttg | gaagtttttt | aaggataggg | gtcgtatggt | gttttttttag | gttagtaatt | 660 |
| aaatttagaa | aacgtttatt | gagtgaatga | tgaaacgata | ggtgaataga | tgaacgtaag | 720 |
| gtgtcgagtt | aattattttt | ttatataagt | tttagtagtt | tttattgttt | ttagtcgtag | 780 |
| aaatggtttt | tggaaggtaa | gttttttagc | gagtggagtt | attttttaatt | atatttttta | 840 |
| ggatttttaag | ggagtcgcgc | gttttgcgtt | tattttttta | ttagaaatcg | gtaagttatt | 900 |
| gattttcgtt | tcgttttcgt | tatttttcgt | ttttttttgt | ttcgtagtcg | gcgttttagcg | 960 |
| gttttgtttg | ttcgtgtgtg | tgctcgttga | ggtttttatt | atgggtttat | cgttgaggtt | 1020 |
| cgacgggcgg | gtggtatttg | ttatcggcgc | gggggtaggt | gagtatgcga | aggttggagg | 1080 |
| tcgcgttttt | tggtgaggcg | tagttggttg | tttttttcgg | gtcgggtatac | gcgcgtagtc | 1140 |
| gtagttgagg | ttatttcgtt | gaggtggtgg | ggaggggaat | ggttattttt | gaggtatcgt | 1200 |
| attttttgag | gaggaaagag | tcggaaatat | ttgggttttt | aagtaggtat | agttcgtttt | 1260 |
| tttttagtat | ttcgggtgtg | gttttttaag | gttttgtttg | agaggagagg | ttaggttggg | 1320 |
| ttgttgattg | taaaattggg | tgaaaagttt | ttttgatttt | tatttgtggg | tatcgattgt | 1380 |
| tatttttttt | gtaattaatt | tttttagatt | tttgtttagt | tttttaaagg | attgaaaagt | 1440 |
| cgcgaggggc | gggggttgga | attcgttttt | tgaagcgtag | agatgttagt | ttttgaaaag | 1500 |
| ttattcggtc | gttttagtgt | tgtttttttt | tgctcgtaga | ttttaagttc | gtgagaggat | 1560 |
| tttttttaaa | gagggcgttt | gataagagtt | tttttttcgt | ggagtttgta | tgtttagtaa | 1620 |
| gttataattt | gtttttcgaaa | tttattggag | ttttggtaga | ggttgtaagt | ttaaatgcgt | 1680 |
| ataggggtta | ggcgtatgat | ggagaaagaa | aatgggagta | ggatgggtat | atttgaggaa | 1740 |
| ttggagagta | ggaaatttcg | aagtggatcg | gttagtgga | aagttgtttg | tatttttagga | 1800 |
| gcggtaaaaa | ggaaaattgt | tatgtgaaat | agttttattt | tttaaagtat | aaaaaattaa | 1860 |
| aataaattat | ttatattaat | atagatgttg | tgtagtgaga | ttttatatta | gttttttatt | 1920 |
| agtgggtgat | ttttgttaatt | tttaagtgt | gggattttga | tattatgtat | ttttgatttt | 1980 |
| ttattggtag | tattttatat | ttggaaaggt | tttaatgtat | gaattatttg | agttatatat | 2040 |
| taaacgttat | aaattggaat | tttgtttaatt | aattttttatg | tattttttata | tttgatttga | 2100 |
| taaagtgggt | ttttatgttg | tttttttagaa | aatgttttta | gtgttgatga | atagttaagt | 2160 |
| atttttatatt | tatatgttgt | tggttatttt | tgtatgggta | tgatatttggg | tgtagttata | 2220 |
| tttttttaaat | gttttttagga | aaatattttt | tttatatttt | gttttttattg | taaataatgt | 2280 |
| atttttataac | gtttggtgtt | ttaaattttt | tttgatagtt | tttggataat | ttttatgtag | 2340 |
| gaggttttagg | gatttatatt | taagacgttt | ttgttatcgt | taaggagatt | ttttttttta | 2400 |
| ggggttatat | ttgaaaatta | tttaaggata | gggattgttt | tttttgatat | tattagtata | 2460 |
| tttatatatg | gtatgtagta | tatttttatat | tagtatattag | t | | 2501 |

<210> 9

<211> 2501

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 9

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| attgagtatt | ggtgtaaaat | gtattgtata | ttatgtgtaa | gtatgttaat | ggtgttaaaa | 60 |
| gaagtagttt | ttatTTTTga | atgattttta | gatatagttt | ttgaaaagga | aagttttttt | 120 |
| agcgatggta | aaaacgtttt | agaatgtaat | ttttggattt | tttgatgaa | aattatttaa | 180 |
| gagttgttaa | aaaagattta | aaatattaag | cgttgtaaaa | tatattttt | ataataaaaag | 240 |
| taaagtgtaa | ataaaatggt | tttttaaaaa | tatttagaag | gtatgattat | atttaaatat | 300 |
| atgtttatgt | agagataaatt | agatagtatt | gggtataaaa | tatttggtta | tttattaata | 360 |
| ttgaaagtat | tttttgaaag | gtagtataag | aagttatttt | attaatatag | atatgaaagt | 420 |
| atataggaat | taattgatag | aatttttagtt | tgtaacgttt | aatatataat | ttaataaatt | 480 |
| tatgtattag | ggttttttta | ggtataaggt | attattagt | gagaattaaa | ggtgtataat | 540 |
| gttaagattt | ttgtatttgg | aggttataga | ggttattttat | tggtgagaaa | ttaatgtaaa | 600 |
| attttattgt | atagtattta | tgttggtatg | aatggtttgt | tttaattttt | tgtattttta | 660 |
| aaaatgggg | tattttatat | aataattttt | tattttgtcg | tttttgaaat | ataggtaatt | 720 |
| tttttattgg | tcggtttatt | tcggaatttt | ttgtttttta | gttttttaga | tgtgtttatt | 780 |
| ttatttttat | tttttttttt | tattatacgt | ttgatttttg | tcggtatttg | agttttataat | 840 |
| ttttgttaag | atttttagtgg | atttcgagaa | tagattgtga | tttgtaagt | atataaaatt | 900 |
| taacggggaa | gggtttttat | tagacgtttt | ttttaagaa | ggttttttta | cgaattttaaa | 960 |
| attttacgat | agaggggaaat | aaatattgaa | cgatcgaatg | attttttagg | agttgatatt | 1020 |
| tttgcgtttt | agggggcgaa | tttttagttt | cgtttttcgc | ggtttttttag | tttttttaaaa | 1080 |
| gattaggtaa | agatttaaga | gagttaattg | taggaagagt | aataatcgat | gtttatagat | 1140 |
| aagggttagg | gagaattttt | atttagtttt | gtaattagta | gttttagttt | gttttttttt | 1200 |
| ttaggtagga | ttttgggaag | tttataatcg | ggtgttgggg | agaagcgggt | tgtatttgtt | 1260 |
| tgagagatta | ggtgttttcg | gttttttttt | ttttaagaga | tcgggtgttt | taagaataat | 1320 |
| tatttttttt | tttattattt | tagcggggtg | tttttagttg | cggttgcgcg | cgtagtgcgg | 1380 |
| ttcgaaaaga | gtagttagtt | cggttttagt | aaggggcgcg | gtttttaatt | ttcgtatgtt | 1440 |
| tatttgtttt | cgcgtcggtg | atttagtatta | ttcgttcgtc | gaatttttagc | ggtgagttta | 1500 |
| tgaataaggt | ttgtaacgat | atatatacga | ataagtagag | tcggttgacg | tcgattgcgg | 1560 |
| gataggagga | ggcgggggaat | ggcggggg | ggacgaggg | tagtgatttg | tcgatttttt | 1620 |
| gtaggaagat | gagcgtagag | cgcgcggttt | ttttggaatt | ttgggaaatg | tagttaagag | 1680 |
| tgattttatt | cgttggaaga | tttggttttt | aggggttatt | tttgcggttg | gaagtaattg | 1740 |
| gagttgttag | gatttgtgta | gaagaatagt | taattcgata | ttttgcgttt | atttatttat | 1800 |
| ttgtcgtttt | attattttat | taataaacgt | tttttggttt | tagttgttga | tttagagaaa | 1860 |
| tagtatgcgg | tttttatttt | tgaggggttt | tttagagatag | tttttgggaa | ggaaagtttt | 1920 |
| tttttagggat | ggtaaagatt | tgttagtgtg | ataatttttg | tattttttata | tgtaaatatt | 1980 |
| aggggattgt | taaaatgtag | agtttttgat | ttttattgtt | tattttttta | aatagaattt | 2040 |
| taagggggtaa | aaatattttg | ataagtgttt | ttaaatgatt | ttgcgtttgt | atgttgagaa | 2100 |
| tagttatagt | ttaatttaata | tttattgagt | attttttgag | ttttgatagg | atttttaagt | 2160 |
| tatttagagt | tagatggtaa | atttttaata | acggtgtagt | ttagatttgt | gattaatgtg | 2220 |
| tgtaagttag | ttaatgggtg | taaaataaat | agattttatt | ttcggtgggg | agaaagagga | 2280 |
| aaaatttttt | gaaggaggat | taggatttaa | agtggcgatt | tttgtaaaga | aagaagggtg | 2340 |
| ttataggtag | tataaatatt | agttaggttt | ggggagaaag | agggtaaagt | tataaaagta | 2400 |
| aagttagtaa | gattatgttt | agatgtttga | attttgtgtt | gaaaacggtt | ttaagtagga | 2460 |
| ttatttttaga | gagtgggtgg | aatataattta | tattatggaa | a | | 2501 |

<210> 10

<211> 2470

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 10

14/45

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| aaagatgatt | aaaagtttaa | ttgtttat | gaagagttga | tttttttatt | tttgtaataa | 60 |
| agggtat | tagtagtt | tgttat | gtttattcgg | tttttttgt | ggttgtgtaa | 120 |
| ggttataa | tttgtgt | agtaaattg | tgtatgttta | ttttttttt | tgttattatt | 180 |
| tttttttta | tttgtttta | ttattttgat | gtaaaattat | ttgttaattt | tatttgaaat | 240 |
| gagaaattt | aaggtttata | ttattttaa | tttgtttagat | ttttat | gttatatggt | 300 |
| ttataatgtg | ttgggtat | ttagattt | ttattaaaa | gatgtaaaat | aaaataatga | 360 |
| ttattttt | ggattttt | tttatttt | agatgttt | tttggtt | ttattttt | 420 |
| attttttgt | tattgatt | aggaggggt | tttaattatg | gtgaatttta | tattttattg | 480 |
| aagaggttat | gttatatgta | tatttttata | atataattta | tatttatata | gtatttttat | 540 |
| tttttagtata | ttttttttta | tttaattttaa | taatattatt | gtaagttagt | ttgaagtaga | 600 |
| ttgttaagt | ttatttataa | attgtgaaat | gaattaaaa | gaaagggtaa | agattaaatt | 660 |
| atgattaggt | ttgaaattaa | tataataagat | tttaattttt | tttaattaa | attttt | 720 |
| gtgatttt | tttgtaggat | ttttttttt | tttttagatg | tattggattg | tattaggtt | 780 |
| attgtagatt | ttagtcgtt | tagaattaat | tagatttaag | atgagtttt | tgatttttt | 840 |
| tggttagagt | ttttaattgt | tgaattttaa | tattgtcgtg | attagttagt | gttataatt | 900 |
| gtttgtttta | ttttgtgtaa | tggattttat | attatagagg | tattttttta | atgttaagat | 960 |
| gtttaagt | gtttaagt | taaaatttt | aataattttt | agttattaag | taattaagat | 1020 |
| aggtaggatt | ttattt | taaaatgatt | tgattttaa | taaaaagaga | atgtggatt | 1080 |
| tttgaattt | atttggttaa | ttttaatata | atttttagta | ttttataatt | ttttttaa | 1140 |
| tttttttatt | tggttatt | ttgtatttt | tttgttttt | ttttttttt | ttagttataa | 1200 |
| taattgttag | attttgttt | atttttttt | gatagtttt | atttttaagg | ttatttatt | 1260 |
| tttttaggta | tttttgggt | ttagttagag | tatagtagat | tttaagatta | tatatgttat | 1320 |
| agtatagg | attatagtta | attttttgaa | taaatgtgat | tgaattttat | gttagtaatt | 1380 |
| tttatttatt | atttttttat | taaaaagggt | taaagtttt | atttaatgtt | tttttttatg | 1440 |
| tttattttgt | taaatgattg | ttttttaatg | atatttttaga | atttttagaat | tattttatta | 1500 |
| tggaggatgt | gtaagattag | ttttttatta | aataaaaaagt | gtgaaatgga | atatgtaatt | 1560 |
| ttattaattt | attttgggtt | taaaattttg | tgattattag | ataaaaattta | gaaataaaat | 1620 |
| agtattatta | atataaataa | attttttatta | taattatatt | ttttaagttt | tgtttgtaag | 1680 |
| aatgggtaaa | atttttttaa | aattttgaag | aaattattat | ttgatagaaa | gtttaattta | 1740 |
| tttgtgagaa | ggtaaatgta | tttagatata | attaaagt | ttttttttat | tttaatttta | 1800 |
| tttattttga | attaagattt | tattgtttta | tttttttaga | tgttgttatt | tgaataatat | 1860 |
| tgttttgaga | ttaaaaatta | gtatattaat | ataattttt | ttaaacgtt | taagagt | 1920 |
| gtttttttta | ttttttttt | taaaaataag | tagttattaa | atttttttagt | agtgaattt | 1980 |
| aaaattttt | tttaattttat | aggtttaagg | gtagtttaagg | atggtt | ttttatatga | 2040 |
| ttagtgtta | aagtaagttg | aggattgaa | gatggagaat | ttaaattttc | gataagagt | 2100 |
| agaagataat | tttaattatt | ttataaaatt | ggaaattgag | gtatttaata | tgaaggatt | 2160 |
| aagattgtga | tttttaattg | tagtttattt | atttttattt | agtattttt | tttgtaaaatt | 2220 |
| tgaggtaaga | tattttattt | aaaagtgtat | tttaaaattaa | gtaataatat | gtaaaattt | 2280 |
| ttttgtaaaa | gttttagttt | atatttttaa | ataagatata | ttgaatttat | ttagtgaatt | 2340 |
| atataaagaa | aataagtgt | aaattttaat | ggttagttag | tttttagttt | tttttaagat | 2400 |
| taaagagaag | agattaaata | tagtattatt | gtattgaggt | aaggttttt | gtgtagttta | 2460 |
| tagaaattag | | | | | | 2470 |

<210> 11

<211> 2470

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 11

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| tttttt | attttaaaa | gaattaagaa | tttaattagt | attggagt | tatattt | 120 |
| ttttttat | gatttattga | atgaatttaa | tatattttat | ttaaaaatat | aaatgttaa | 180 |
| ttttgtaaga | aagagttt | atattattgt | tttaattttaa | atataattt | aagtaaagt | 240 |
| ttttatttta | agtttataag | agggaatatt | gaataaaaa | ggataaatta | taattaaaag | 300 |

| | | | | | | |
|-------------|--------------|-------------|-------------|-------------|-------------|------|
| ttatagtttt | gatatttttta | tattagatgt | tttagttttt | agttttgtaa | gatgattgga | 360 |
| attatttttt | agtttttgtc | gaagatttga | gttttttatt | tttagtggtt | taatttggtt | 420 |
| taataattga | ttatatgaag | ttgtagttaa | ttttgggtat | ttttggattt | ataagggttaa | 480 |
| aaaggatttt | gaaattttatt | attaaaaaat | ttagtgggtg | ttttgtttta | aagaaagggg | 540 |
| taaaggaaat | aaaatttttta | agacgtttta | gaagaattgt | gttaatatgt | tagtttttgg | 600 |
| ttttaaaata | atattgttta | agtagtagta | tttaagagga | tgaaatagtg | gagtttttagt | 660 |
| ttaagataaa | tgaaattaaa | atagaagaga | gaatttttagt | tgtgtttgaa | tatatattggt | 720 |
| tttttataga | tggattaaat | tttttattaa | gtaataattt | ttttaagggt | ttaaagatat | 780 |
| tttattttatt | tttataggta | aaatttagga | aatataatta | tgataaaaaat | ttattttatat | 840 |
| tagtaaatatt | atttttatttt | tgaattttat | ttgatagtta | tagaatttta | gagttagaat | 900 |
| ggattaatga | gattatataat | tttatittat | atttttttatt | tgataaaaagg | ttaattttat | 960 |
| atattttttt | tgggtgaaata | gttttgaaat | tttaagatgt | tattaaaagg | taattatttta | 1020 |
| ataaaattga | tatgaaggag | agtatttaaat | gaagatttta | agtttttttg | ataggaagat | 1080 |
| ggtaaatgaag | aattatttaaat | ataaagttta | attatatttta | tttaaaagggt | tgattataat | 1140 |
| agtttatgtt | atgggtatatg | tgggttttggg | atttggtgtg | tttaaatga | ggttaaaaga | 1200 |
| tatttaaaga | gaatggatga | ttttaggagt | agagattgtt | aaagagaaat | gaagtagagt | 1260 |
| ttggtagtta | ttatgattgg | gaaagaagag | gagagataaa | gaagatataa | aagatagtta | 1320 |
| ggtaagagga | ttttagggaag | aattatagaa | tgttaggagt | tatattaaga | ttaatatagt | 1380 |
| aagatttagg | agattttatat | ttttttttta | gtttagggtta | aattatttttg | gaataaataa | 1440 |
| aattttgttt | atttttaatta | tttaatatgtt | aaaaagtatt | aagtagtttg | tatttaagta | 1500 |
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| gtgtttaaat | attgtaatat | tgggggtttt | ttaaagtata | aaaatatata | tttgtatgat | 900 |
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17/45

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<220>
 <223> chemically treated genomic DNA (Homo sapiens)

<400> 14

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<220>

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| gcgcgaaggt | aaggtttgtg | gaaatggtag | ggagggtgga | ggggatgtag | gaggtaggga | 180 |
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26/45

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| tttaggggtg | agaattttat | ttaagtaggg | agaaaggag | ttgaggaatt | agtgtttttt | 2760 |
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| gttttgggtg | tgttttgggt | gggggttgtt | aatttttggg | tggggttttg | gtgggtgggt | 2880 |
| tgtggggagt | ggaggtagt | gttgttgtgt | tgggtagagt | gtgaagggtg | gggttgggtg | 2940 |
| ggggagggtg | ttatattggg | gtaggaggtt | gaggtaggaa | gtagggtggg | gggagggggg | 3000 |
| agttatgtag | tttttagggg | agggaggggg | tagtgttttg | ggtgggtatg | gtgtatagtt | 3060 |
| gggtgtgtgt | ttgatttggg | tttgtgtttt | atttgttgtt | tgggttttgg | ttgggtttta | 3120 |
| tatgtgtggg | tttgggtgtt | tttttttgtg | tttttttggg | tttttttttt | ttggaatttt | 3180 |
| gttgttttaa | atttggggaa | aagttttttt | attgtagata | gggtgggagg | agtgtgttgg | 3240 |
| tttttaggtt | ttgggttgtt | gttttttttt | gtgggttttt | aatttgggtg | tagagtgttg | 3300 |
| agttgagttt | tgagtttttt | tgtttgttgt | ttgttttgtt | gatttttgtt | tttttttgtt | 3360 |
| ttgtgggggt | ttgtgggttg | ttatttgttg | ttttgggtgg | ttgggttttt | tttttttgtg | 3420 |

29/45

| | | | | | | |
|-----------|------------|----------|-----------|------------|------------|------|
| tggtgtagt | ttttagttga | tgttttat | gttggtgta | ggttttgagt | tgtgttaggg | 3480 |
| tagtgtttt | gtaggtttg | t | | | | 3501 |

<210> 18

<211> 2501

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 18

| | | | | | | |
|-------------|-------------|------------|-------------|-------------|-------------|------|
| tttttatagt | gtaaatgtgt | ttttattatt | ttttggagta | attttattta | aaattgtttt | 60 |
| tagtataaaa | tttaaataatt | taaatatgat | tttggttggt | ttgtttttgt | ggttttat | 120 |
| tttttttttt | taaatttagt | tagtgtttgt | gttggttgta | atgttttttt | ttttttgtag | 180 |
| gggttggtat | tttaggtttt | ggtttttttt | tagaaagttt | tttttttttt | tttttagtgg | 240 |
| ggataggggt | tgtttatttt | gatattatta | gtttatttat | atatattggt | tataagttaa | 300 |
| ggttgtattg | ttattgaaag | tttattat | gattttgagt | agtttgagga | ttttattaaa | 360 |
| atttaggaga | tgtttagtaa | atggttgatt | aattatgatt | gtttttaata | tataaatgta | 420 |
| agattattta | ggaatatttg | ttaaaatggt | tttggttttt | gagattttat | tttgggaggt | 480 |
| aagtagtggg | ggtttaggat | tttgattttt | gatagttttt | tgatgtttgt | atgtagaagt | 540 |
| gtagggatta | ttatattgat | aaatttttat | tatttttaag | ggggattttt | tttttagggg | 600 |
| gttatttttt | gaagtttttt | aaggataggg | gttgatgtgt | gttttttttag | gttagtaatt | 660 |
| aaatttagaa | aatgtttatt | gagtgaatga | tgaaatgata | ggtgaataga | tgaatgtaag | 720 |
| gtgttgagtt | aattattttt | ttatataagt | tttagtagtt | tttattgttt | ttagttgtag | 780 |
| aaatggtttt | tggaaggtaa | gttttttagt | gagtggagtt | atttttaatt | atatttttta | 840 |
| ggattttaag | ggagtgtgtg | gttttgtgtt | tattttttta | ttagaaattg | gtaagttatt | 900 |
| gattttttgt | ttgtttttgt | tattttttgt | ttttttttgt | tttgtagttg | gtgttttagt | 960 |
| gttttgtttg | tttggtgtgt | gttggttgta | ggtttttatt | atgggtttat | tggtgaggtt | 1020 |
| tgatgggtgg | gtggtatttg | ttattggtgt | gggggtaggt | gagtatgtga | aggttgaggg | 1080 |
| ttgtgttttt | gttgaggtg | tagttgggtg | ttttttttgg | gttggtatat | gtgtgtagtt | 1140 |
| gtagttgagg | ttattttgtt | gaggtgggtg | ggaggggaat | ggttattttt | gaggtattgt | 1200 |
| attttttgag | gaggaaagag | ttggaaatat | ttggtttttt | aagtaggtat | agtttggttt | 1260 |
| tttttagtat | tttggtgtgg | gttttttaag | gttttggttg | agaggagagg | ttaggttggg | 1320 |
| ttggttgatt | taaaattggg | tgaaagtgtt | ttttgatttt | tatttggtgg | tattgattgt | 1380 |
| tatttttttt | gtaatttaatt | tttttagatt | tttggttagt | tttttaaagg | attgaaaagt | 1440 |
| tgtgaggggt | gggggttgga | atttgttttt | tgaagtgtag | agatgttagt | ttttgaaaag | 1500 |
| ttatttggtt | gttttagtgt | tgtttttttt | tgttgttaaga | ttttaagttt | gtgagaggat | 1560 |
| tttttttaaa | gaggtgtgtt | gataagagtt | ttttttgttt | ggagtttgta | tgtttagtaa | 1620 |
| gttataattt | gtttttgaaa | tttattggag | ttttggtaga | ggttgtaagt | ttaaatgtgt | 1680 |
| ataggggtta | ggtgtatgat | ggagaaagaa | aatgggagta | ggaatgggtat | atttgaggaa | 1740 |
| ttggagagta | gagaattttg | aagtggattg | gttagtgga | aagttgtttg | tatttttagga | 1800 |
| gtggtaaaat | ggaaaattgt | tatgtgaaat | agttttat | tttaaagtat | aaaaaattaa | 1860 |
| aataaattat | ttatattaat | atagatgttg | tgtagtgaga | ttttatatta | gttttttatt | 1920 |
| agtgggtgat | ttttgtaatt | tttaagtgt | gggattttga | tattatgtat | ttttgatttt | 1980 |
| ttattggtag | tattttatat | ttggaaaggt | tttaatgtat | gaattatttg | agttatata | 2040 |
| taaatgttat | aaattggaat | tttgtaatt | aatttttatg | tatttttata | tttgattga | 2100 |
| taaagtgggt | ttttatgttg | tttttagaa | aatgttttta | gtgttgatga | atagtttaagt | 2160 |
| attttatatt | tatagttgtt | tgggtatttt | tgtatgggt | tgtatttggg | tgtagttata | 2220 |
| ttttttaaat | gttttttagga | aaatattttg | tttatatttt | gtttttattg | taaataatgt | 2280 |
| atttttataat | gtttggtgtt | ttaaattttt | tttgatagtt | tttgataaat | ttttatgtag | 2340 |
| gaggttttagg | gatttatatt | taagatgttt | ttgttattgt | taaggagatt | ttttttttta | 2400 |
| ggggttatat | ttgaaaatta | tttaaggata | gggattgttt | tttttgatat | tattagtata | 2460 |
| tttatatatg | gtatgtagta | tattttatat | tagtatttag | t | | 2501 |

<210> 19

<211> 2501

<212> DNA

30/45

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 19

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| attgagtatt | ggtgtaaaat | gtattgtata | ttatgtgtaa | gtatgttaat | ggtgttaaaa | 60 |
| gaagtagttt | ttatTTTTga | atgattttta | gatatagttt | ttgaaaagga | aagttttttt | 120 |
| agtgatggta | aaaatgtttt | agaatgtaat | ttttggattt | tttgtatgaa | aattatttaa | 180 |
| gagttgttaa | aaaagattta | aaatattaag | tgttgtaaaa | tatattattt | ataataaaag | 240 |
| taaagtgtaa | ataaaatggt | tttttaaaaa | tattttagaag | gtatgattat | attttaaata | 300 |
| atgtttatgt | agagataaatt | agatagttat | gggtataaaa | tatttgggta | tttattaata | 360 |
| ttgaaagtat | tttttgaaag | gtagtataag | aagttatttt | attaatatag | atatgaaagt | 420 |
| atataggaat | taattgatag | aatttttagtt | tgtaatgttt | aatatataat | ttaaataaatt | 480 |
| tatgtattag | ggttttttta | ggtataagggt | attatttagtg | gagaattaaa | ggtgtataaat | 540 |
| gttaagattt | ttgtatttgg | aggttataga | ggttattttat | tggtgagaaa | ttaatgtaaa | 600 |
| attttattgt | atagtattta | tgttgggtatg | aatggtttgt | tttaattttt | tgtattttta | 660 |
| aaaatgggggt | tattttatat | aataattttt | tattttgttg | tttttgaaat | ataggtaatt | 720 |
| tttttattgg | ttggtttatt | ttggaatttt | ttgtttttta | gttttttaga | tgtgtttatt | 780 |
| ttatttttat | tttttttttt | tattatatgt | ttgatttttg | tgtgtatttg | agtttataat | 840 |
| ttttgttaag | attttagtgg | attttgagaa | tagattgtga | tttgtttaagt | atataaaatt | 900 |
| taatgggggaa | gggtttttat | tagatgtttt | ttttaaagaa | ggttttttta | tgaattttaa | 960 |
| attttatgat | agagggaaat | aaatattgaa | tgattgaatg | attttttagg | agttgatatt | 1020 |
| tttgtgtttt | aggggggtgaa | tttttagttt | tgttttttgt | ggtttttttag | tttttttaaaa | 1080 |
| gattaggttaa | agatttaaga | gagtttaattg | taggaagagt | aataattgat | gtttatagat | 1140 |
| aagggttagg | gagaattttt | attttagttt | gtaattagta | gttttagttt | gttttttttt | 1200 |
| ttaggtagga | ttttgggaag | tttatattgg | ggtgttgggg | agaagtgggt | tgtatttgtt | 1260 |
| tgagagatta | ggtgtttttg | gttttttttt | ttttaagaga | tgtgggtgtt | taagaataat | 1320 |
| tatttttttt | tttattattt | tagtgggggtg | attttagttg | tgggtgtgtg | tgtatgttgg | 1380 |
| tttgaaaaga | gtagttagtt | gtgttttagt | aagggggtgtg | gtttttaatt | tttgtatgtt | 1440 |
| tatttgtttt | tgtgttggtg | attagtatta | tttgtttgtt | gaatttttagt | ggtgagttaa | 1500 |
| tgaataagggt | ttgtaatgat | atatatatga | ataagtagag | ttgttggatg | ttgattgtgg | 1560 |
| gataggagga | ggtggggaat | ggtgggggtg | ggatgagggt | tagtgatttg | ttgatttttg | 1620 |
| gtaggaagat | gagtgtagag | tgtgtgggtt | ttttggaatt | ttgggaaatg | tagttaagag | 1680 |
| tgattttatt | tgttggaaga | tttgtttttt | aggggttatt | tttgtggttg | gaagtaatgg | 1740 |
| gagttgttag | gatttgtgta | gaagaatagt | taatttgata | ttttgtgttt | atttatttat | 1800 |
| ttgttgtttt | attatttatt | taataaatgt | tttttgggtt | tagttgttga | tttagagaaa | 1860 |
| tagtatgtgg | tttttatttt | tgagggggtt | tttagagatag | tttttgggaa | ggaaagtttt | 1920 |
| tttttagggat | ggtaaagatt | tgttagtgta | ataatttttg | tattttttata | tgtaaatatt | 1980 |
| aggggattgt | taaaaatgtag | agttttggat | ttttattgtt | tattttttta | aatagaattt | 2040 |
| taagggggtaa | aaatattttg | ataagtgttt | ttaaatgatt | ttgtgtttgt | atgttgagaa | 2100 |
| tagttatagt | ttaattaata | tttattgagt | attttttgag | ttttgatagg | atttttaagt | 2160 |
| tatttagagt | tagatggtaa | atttttaata | atgggtgtagt | ttagatttgt | gattaatgtg | 2220 |
| tgtaagttag | ttaatgggtg | taaaataaat | agattttatt | tttgttgggg | agaaagagga | 2280 |
| aaaatttttt | gaaggaggat | taggatttaa | agtgggtgatt | tttgtaaaga | aagaagggtg | 2340 |
| ttataggttag | tataaatatt | agttagggtt | ggggagaaag | agggtaaaagt | tataaaagta | 2400 |
| aagttagtaa | gattatgttt | agatgtttga | attttgtgtt | gaaaatgggt | tttaagtagga | 2460 |
| ttatttttaga | gagtgggtggg | aatatatatta | tattatggaa | a | | 2501 |

<210> 20

<211> 2470

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

31/45

<400> 20

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| aaagatgatt | aaaagtttaa | ttgtttattt | gaagagttga | tttttttatt | tttgtaataa | 60 |
| agggtatttt | tagtagtttt | tgttttattt | gtttatttgg | ttttttttgt | ggttggtgtaa | 120 |
| ggttataatt | tttgtgtttt | agtaaaattg | tgtatgttta | tttttttttt | tgttattatt | 180 |
| ttttttttta | tttgttttta | ttattttgat | gtaaaaattat | ttgttaattt | tatttgaaat | 240 |
| gagaaatttt | aaggtttata | ttattttaaat | tttgtttagat | ttttattttt | gttatatggt | 300 |
| ttataatgtg | ttgggtattt | ttagattttg | ttatttaaaaa | gatgtaaaaat | aaaataatga | 360 |
| ttattttttg | ggattttttt | tttatttttg | agatgttttt | tttggttgta | ttattttttt | 420 |
| atttttttgt | tattgattag | aggaggggtt | ttaattatgg | gtgaatttta | tattttattg | 480 |
| aagaggttat | gttatatgta | tattttttata | atataattta | tatttatata | gtatttttat | 540 |
| tttttagtata | ttttttttta | tttaattttaa | taattatttt | gtaagttatg | ttgaagtaga | 600 |
| ttgtaagtgt | ttatttataa | attgtgaaat | gaattaaaaat | gaaagggtaa | agattaaatt | 660 |
| atgattagg | ttgaaattaa | tatataagat | tttaattttt | tttaattaaag | atttttgtag | 720 |
| gtgatttttg | tttgtaggat | tttttttttt | tttttagatgt | tattggattg | tattagggtt | 780 |
| attgtagatt | ttagtgtgtg | tagaattaat | tagatttaag | atgagttttt | tgattttttt | 840 |
| tggtagagtt | ttttaattgt | tgaattttta | tattgttggtg | attagttagt | gttataaatt | 900 |
| gtttgtttta | tttgtgtgta | tggattttat | attatagagg | tattttttta | atgttaagat | 960 |
| gtttaagtat | tgtttaagtg | taaaattatt | aatatttttt | agttattaag | taattaagat | 1020 |
| aggtaggatt | ttattttgtt | taaaatgatt | tgattttaaat | taaaaagaga | atgtggattt | 1080 |
| tttgaatttt | atttggttaa | ttttaatata | atttttagta | ttttataatt | ttttttaaag | 1140 |
| tttttttatt | tggttatttt | ttgtattttt | tttggttttt | tttttttttt | ttagttataa | 1200 |
| taattgttag | attttgtttt | attttttttt | gatagttttt | atttttaagg | ttattttatt | 1260 |
| tttttaggta | ttttttggtt | ttagtttgag | tatagtagat | tttaagatta | tatatgttat | 1320 |
| agtatagggt | attatagtta | attttttgaa | taaatgtgat | tgaattttat | gttagtaatt | 1380 |
| tttattttatt | atttttttat | taaaaagggt | taaagttttt | atttaatggt | tttttttatg | 1440 |
| tttatttttg | taaatgattg | tttttttaag | atattttaga | atttttagaat | tattttatta | 1500 |
| tggaggatgt | gtaagattag | ttttttatta | aataaaaaagt | gtgaaatgga | atatgtaatt | 1560 |
| ttattaattt | atttttggtt | taaaattttg | tgattattag | ataaaattta | gaaataaaat | 1620 |
| agtattatta | atataaataa | atttttatta | taattatatt | ttttaagttt | tgtttgtaag | 1680 |
| aatgggtaaa | atatttttaa | aattttgaag | aaattattat | ttgatagaaa | gtttaattta | 1740 |
| tttgtgagaa | ggtaaatgta | tttagatata | attaaagtgt | ttttttttat | tttaatttta | 1800 |
| tttattttga | attaagattt | tattgtttta | tttttttaga | tgttgttatt | tgaataatat | 1860 |
| tgttttgaga | ttaaaaatta | gtatattaat | ataatttttt | ttaaatgttt | taagagtttt | 1920 |
| gtttttttta | tttttttttt | taaaaataag | tagttattaa | attttttagt | agtgaatttt | 1980 |
| aaaatttttt | tttaattttat | aggtttaagg | gtagtttaagg | atggttgtag | ttttatatga | 2040 |
| ttagttgtta | aagtaagttg | aggtattgaa | gatggagaat | ttaaattttt | gataagagtt | 2100 |
| agaagataat | tttaattatt | ttataaaatt | ggaaattgag | gtatttaata | tgaaggattt | 2160 |
| aagattgtga | tttttaattg | tagttttatt | attttttatt | agtatttttt | tttgtaaaatt | 2220 |
| tgaggtaaga | tattttattt | aaaagtgtat | tttaaatata | gtaataatat | gtaaattttt | 2280 |
| ttttgtaaaa | gttagtattt | atatttttaa | ataagatata | ttgaattttat | ttagtgaatt | 2340 |
| atataaagaa | aataagtgtg | aaattttaat | ggttagttag | tttttagttt | tttttaagat | 2400 |
| taaagagaag | agattaaata | tagtattatt | gtattgaggt | aaggtttttt | gtgtagttta | 2460 |
| tagaaattag | | | | | | 2470 |

<210> 21

<211> 2470

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

<400> 21

| | | | | | | |
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| ttagttttta | tgaattatat | agaaaatttt | gttttagtat | agtgatgtta | tatttggttt | 60 |
| ttttttttta | atttttaaaa | gaattaagaa | tttaattagt | attggagttt | tatattttatt | 120 |
| ttttttatat | gatttattga | atgaatttaa | tatattttat | ttaaaaatat | aaatgttaat | 180 |

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| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| ttttgtaaga | aagagtttat | atattattgt | ttaattttaa | atataatttt | aagtaaagt | 240 |
| ttttattttt | agtttataag | agggaaatatt | gaataaaaaat | ggataaatta | taattaaaag | 300 |
| ttatagtttt | gatattttta | tattagatgt | tttagttttt | agttttgtaa | gatgattgga | 360 |
| attatttttt | agtttttggt | gaagatttga | gttttttatt | tttagtggtt | taatttggtt | 420 |
| taataattga | ttatatgaag | ttgtagttat | ttttgggtat | ttttggattt | ataagggtta | 480 |
| aaaggatttt | gaaattttat | attaaaaaat | ttagtgggtg | tttgttttta | aagaaagggg | 540 |
| taaaggaaat | aaaattttta | agatgtttta | gaagaattgt | gttaatatgt | tagtttttgg | 600 |
| ttttaaaata | ataattgttt | agtagtagta | tttaagagga | tgaaatagt | gagtttttagt | 660 |
| ttaagataaa | tgaaatttaa | atagaagaga | gaatttttagt | tgtgtttgaa | tatatttggt | 720 |
| tttttataga | tggtattaaat | tttttattaa | gtaataattt | ttttaagggt | ttaaagatat | 780 |
| tttattttat | tttataggta | aaatttagga | aataataatt | tgataaaaaat | ttatttatat | 840 |
| tagtaaatatt | attttatttt | tgaattttat | ttgatagtta | tagaatttta | gagtttagaat | 900 |
| ggattaattga | gatttatatat | tttattttat | attttttatt | tgataaaaagg | tttaattttat | 960 |
| atattttttt | tgggtgaaata | gttttgaaagt | tttaagatgt | tattaaaagg | taattatttt | 1020 |
| ataaaatgga | tatgaaggag | agtattaaat | gaagatttta | agtttttttg | ataggaagat | 1080 |
| ggtaaataag | aattattaat | ataaagttta | atttatattt | tttaaaagg | tgattataat | 1140 |
| agtttatgtt | atggtatatg | tgggtttggg | atttggtgtg | tttaaatga | ggttaaaaga | 1200 |
| tatttaaaga | gaatggatga | ttttaggagt | agagattggt | aaagagaaat | gaagtagagt | 1260 |
| ttggtagtta | ttatgattgg | gaaagaagag | gagagataaa | gaagatataa | aagatagtta | 1320 |
| ggtaagagga | tttttaggaag | aattatagaa | tgttaggagt | tatattaaga | tttaattaat | 1380 |
| aagatttagg | agatttatat | ttttttttta | gtttaggtta | aattattttg | gaataataaa | 1440 |
| aattttgttt | atttttaatta | tttaatagtt | aaaaagttat | aagtagtttg | tattttaagta | 1500 |
| atatttaaat | attttgatat | taaaaaaatg | tttttgtaat | atgaaattta | ttatataaaa | 1560 |
| taaggtagat | aggttgtaat | attggttagt | tatgataata | ttggagttta | gtaattggaa | 1620 |
| gattttatta | aaggaaatta | ggggatttat | tttagattta | gttagtttta | taatggttag | 1680 |
| aatttatagt | aaatttggtg | taatttaatg | atatttgagg | aggaagggga | gttttgtagg | 1740 |
| tagggattat | ttataaaagt | ttttggttga | aaaaaattga | gttttggtgtg | tttaattttag | 1800 |
| gtttggttat | gatttaattt | ttgttttttt | atttttaattt | attttataat | ttgtaaatga | 1860 |
| atattttata | tttgttttta | tataatttat | agtgatatta | ttaggattaa | taaaaaaagg | 1920 |
| tatgttaaaa | ataaaagtat | tatgtaaagt | taagttatat | tatgaaaata | tatatgtaat | 1980 |
| ataatttttt | tagtaagata | tagggtttat | ttatagttta | gatttttttt | ttgattaatg | 2040 |
| ggtaaggggt | gaagaagtaa | tgtagttaaa | ggagatatatt | taaaaataaa | ggaaaaattt | 2100 |
| ataggagtga | ttattatttt | gttttatatt | tttttaataa | gtagggttga | aaatattttag | 2160 |
| tatattataa | attatatgat | agaggtagg | atttgataga | atttgaataa | tgtgaatttt | 2220 |
| aaaatttttt | atttttaaata | aaattaatag | gtaattttat | attaaaataa | taaaaataaa | 2280 |
| taagagaaaa | ggtagtaata | gagaaaaaaa | tgggtatgta | taagtttatt | gagatataga | 2340 |
| agttataatt | ttatataatt | ataaaaagag | ttggatgggt | aagatgagta | gagattgtta | 2400 |
| aaagtatttt | ttattatagg | aataaaaaaa | tttaatttttt | agatgaataa | ttaaattttt | 2460 |
| aattattttt | | | | | | 2470 |

<210> 22

<211> 7001

<212> DNA

<213> Artificial Sequence

<220>

<223> chemically treated genomic DNA (Homo sapiens)

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37/45

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<212> DNA

<213> Artificial Sequence

<220>

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| ttttttatgt | tattagatgg | atttttgtat | ttttagaaga | ttttttatat | taggaaagat | 180 |
| taaagtatta | aggtaatttt | ttttgggttt | ttgggataat | tttaggtttt | ggtatgagt | 240 |
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<220>

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| | | | | | | 8580 |

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| ataaattttt | attttaattt | aattaggggtg | ttgtgattag | aatgtgtaat | tgagggtgtga | 8820 |
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18